



## NEW JERSEY DEPARTMENT OF HEALTH DATA BRIEF: ADOLESCENT VACCINATION

November 2021

### Adolescent Immunization Coverage in New Jersey

Vaccination is one of the most convenient and safest preventive care measures available. Vaccines are needed across the lifespan, including in adolescence. As people age, immunity from some childhood vaccines can wear off. In addition, risk may increase for certain diseases. Vaccines may be needed based on age, health conditions, job, lifestyle, or travel habits.<sup>1</sup>

In addition to an annual flu vaccine, three vaccines are routinely recommended for adolescents to prevent diseases that include pertussis, meningococcal disease, and cancers caused by human papillomavirus (HPV). Additional vaccines may be recommended as catch-up if doses were missed in earlier years. This data brief provides current immunization estimates for adolescents in New Jersey and the United States.<sup>2</sup>

Presented below is a summary graph of New Jersey adolescent immunization rates as compared to national data. Subsequent pages of this data brief present more detailed views of immunization estimates for specific vaccines. Healthy People objectives\* are included, where applicable. The Healthy People objectives and targets are national measurable 10-year objectives for improving health and well-being. Most targets are listed for the 2020 objectives, and 2030 targets are listed when objectives are available.<sup>3</sup>

### Key Findings

- New Jersey's adolescent vaccination rates are similar to national averages for MenACWY Tdap, and HPV up-to-date vaccination. Rates are above national averages for flu vaccination during the 2020-21 flu season.
- The Healthy People 2020\* targets were met for both MenACWY and Tdap vaccines, but lag behind the 80% target for HPV vaccination.

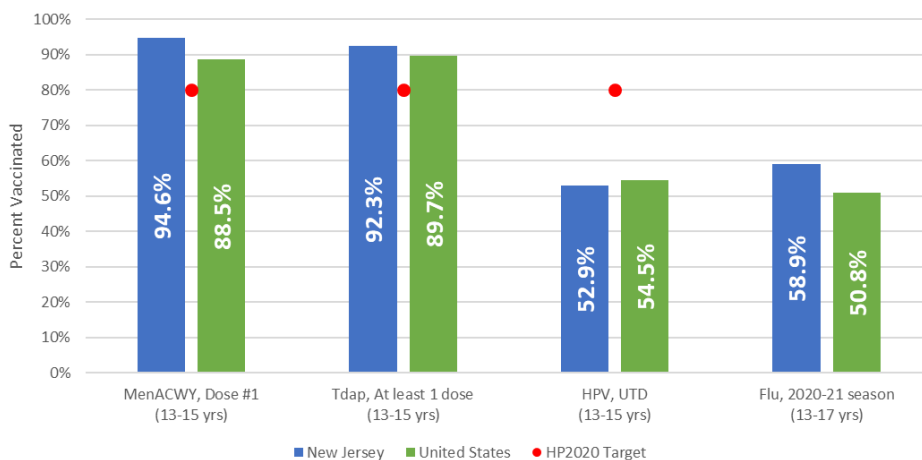
### Data Notes

National and state data were collected through the National Immunization Survey - Teen (NIS-Teen). The NIS-Teen provides a "report card" to let us know how well we are doing in protecting our nation's teens against vaccine-preventable diseases. The NIS-Teen is a random-digit-dialed survey of parents or guardians of teens 13–17 years old and, in 2016, included data for more than 20,000 adolescents. The telephone survey is followed by a questionnaire mailed to vaccination providers to obtain the teen's vaccination history.

### Limitations

- Due to sample size constraints, data are not available for small geographic areas.
- Small sample sizes do not allow for detailed sociodemographic breakdowns for some of the vaccine types.

Estimated adolescent vaccination coverage by antigen, New Jersey, United States, and Healthy People 2020 Objectives, NIS-Teen 2020



Data Source: National Immunization Survey - Teen (NIS-Teen)

Interactive data portals can be accessed via CDC's TeenVaxView Interactive! ([www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html](http://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html)) and CDC's FluVaxView Interactive! ([www.cdc.gov/flu/fluview/interactive.htm](http://www.cdc.gov/flu/fluview/interactive.htm)) webpages.

\*Additional details on the Healthy People objectives and targets can be found at: [www.healthypeople.gov](http://www.healthypeople.gov).



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### Tdap Vaccination

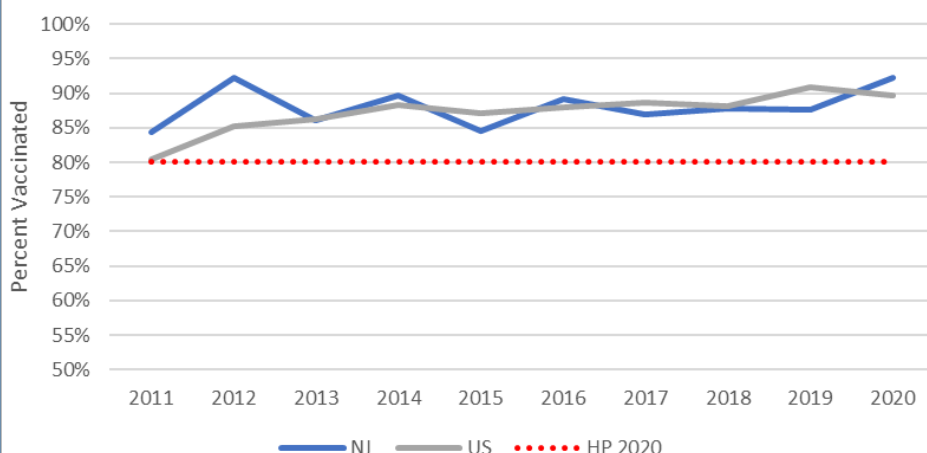
One dose of Tdap vaccination is routinely recommended at 11-12 years. The Tdap vaccine protects against tetanus, diphtheria, and pertussis. Following the dose at 11-12 years, a booster dose of any tetanus-containing vaccine is recommended every 10 years. The NIS-Teen provides data for New Jersey as an overall rate and also provides data by certain demographic characteristics, including poverty level, race/ethnicity, and urbanicity.

### Key Findings

- Tdap vaccination rates in 2020 for adolescents ages 13-15 years were similar for New Jersey (**92.3%**) and national (**89.7%**) averages. Rates have increased slightly since 2011.
- New Jersey has a school requirement<sup>4</sup> for Tdap vaccination, which has helped to maintain high immunization rates that surpass the Healthy People 2020 objective of 80%.
- Tdap vaccination rates vary by poverty level, race/ethnicity, and by urbanicity.
- Adolescents below poverty level had lower Tdap vaccination rates (**78.6%**) as compared to those living at or above poverty level (**91.3%**).
- Adolescents living in an MSA principal city had lower Tdap vaccination rates (**77.8%**) as compared to those in a non-principal city (**90.6%**).

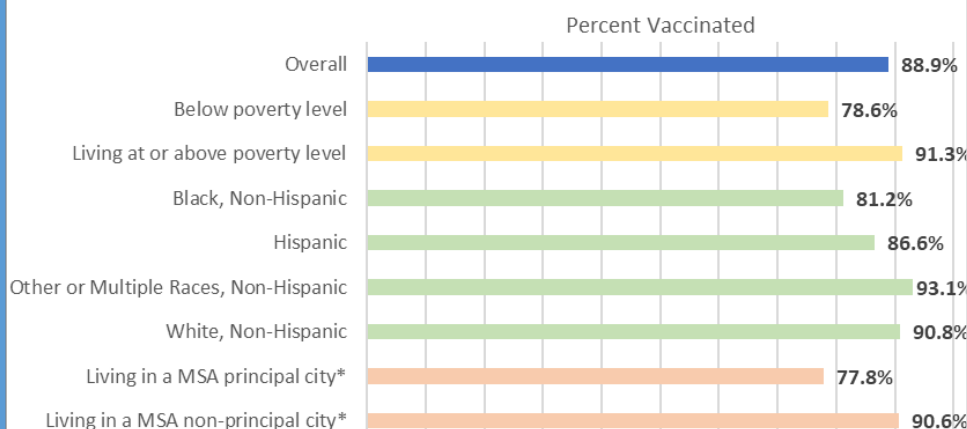
#### TREND DATA

Estimated vaccinated coverage, Tdap 1+ dose, adolescents 13-15 years, 2011-2020, NIS-Teen, United States and New Jersey



#### SELECTED DEMOGRAPHICS

Tdap vaccination coverage among adolescents 13-17 years by various sociodemographic factors, survey years 2015-2019, New Jersey, NIS-Teen



\*Metropolitan Statistical Area (MSA) status was determined based on household-reported county and city of residence and was grouped into three categories: MSA principal city, MSA non-principal city, and non-MSA. MSA and principal city were as defined by the U.S. Census Bureau. Non-MSA areas include urban populations not located within an MSA as well as completely rural areas.

### Target

#### Healthy People 2020 Objective

[IID-11.1] Increase the vaccination coverage level of 1 dose of tetanus-diphtheria-acellular pertussis (Tdap) booster vaccine for adolescents by age 13 to 15 years.

**U.S. Target: 80%**

Data Source: National Immunization Survey—Teen (NIS-Teen). Data can be accessed via TeenVaxView portal at: [www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html](https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html).



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### Human Papillomavirus (HPV) Vaccination

More than 42 million Americans are currently infected with human papillomavirus (HPV) types that cause disease and about 13 million Americans, including teens, become infected with HPV each year. The HPV vaccine has the potential to prevent more than 90% of HPV-attributable cancers.<sup>5</sup>

The vaccine series is recommended for all preteens ages 11-12 years, but can be started as early as age 9 years. The HPV vaccine series requires two doses to be considered up-to-date (UTD); however, three doses are recommended for those who are immunocompromised or initiate the series on or after their 15th birthday. Catch-up vaccination is recommended through age 26 years and may be considered through age 45 years upon a discussion with a healthcare provider.

The data below were obtained from the National Immunization Survey - Teen (NIS-Teen). Trend data is presented for ages 13-17 years for years 2016 to 2020 and data for selected demographics represents years 2015 through 2019.

### Key Findings

- Up-to-date HPV vaccination for 13-17-year-olds in New Jersey has increased from **42.8%** in 2016 to **59.7%** in 2020, and remains similar to national averages. This is below the Healthy People 2020 target of 80%.
- Variances in UTD HPV vaccination are present by poverty level, race/ethnicity, and urbanicity.
- The vaccination target remains at 80% for Healthy People 2030 objectives.

### Targets

#### Healthy People 2020 Objective

[IID-11.5] Increase the percentage of male adolescents aged 13 through 15 years who receive 2 or 3 doses of human papillomavirus (HPV) vaccine as recommended

**U.S. Target: 80%**

#### Healthy People 2020 Objective

[IID-11.4] Increase the percentage of female adolescents aged 13 through 15 years who receive 2 or 3 doses of human papillomavirus (HPV) vaccine as recommended

**U.S. Target: 80%**

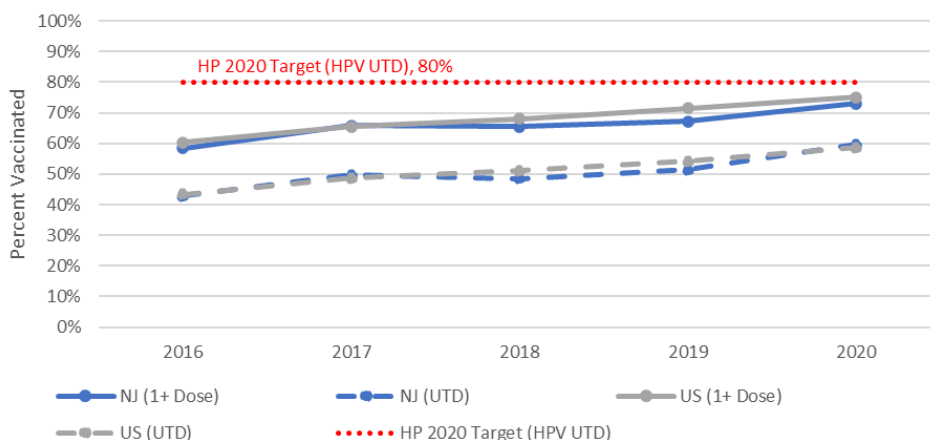
#### Healthy People 2030 Objective<sup>3</sup>

[IID-08] Increase the proportion of adolescents who get recommended doses of the HPV vaccine

**U.S. Target: 80%**

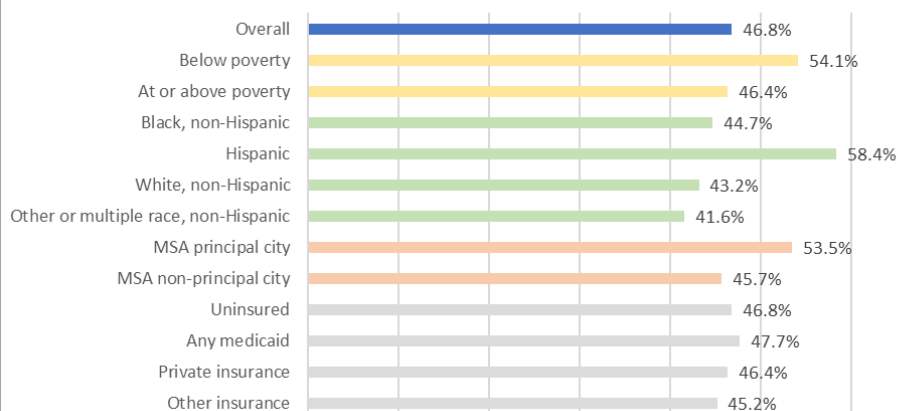
#### TREND DATA

Estimated HPV vaccination coverage, adolescents 13-17 years, United States and New Jersey, NIS-Teen 2016-2020



#### SELECTED DEMOGRAPHICS

Estimated HPV up-to-date vaccination coverage, adolescents 13-17 years, New Jersey, NIS-Teen 2015-2019



Data Source: National Immunization Survey—Teen (NIS-Teen). Data can be accessed via TeenVaxView portal at: [www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html](https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html).



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### Meningococcal Vaccination

Meningococcal disease is any type of illness caused by *Neisseria meningitidis* bacteria. There are two types of meningococcal vaccines available in the United States, meningococcal conjugate (MenACWY) vaccine and serogroup B meningococcal (MenB) vaccines. The CDC currently recommends all preteens to receive one dose of MenACWY vaccine at ages 11-12 years old and to receive a booster dose at age 16 years. CDC recommends MenB vaccines for people 10 and older at increased risk for meningococcal disease. Teens and young adults (16-23 years) may also get a MenB vaccine.

National and state-level meningococcal vaccination data was collected through the National Immunization Survey-Teen (NIS-Teen).

### Key Findings

- In 2020, the CDC reported that nationally, **88.5%** of teens 13-15 years received one or more doses of MenACWY vaccine as compared to **94.6%** in New Jersey.
- New Jersey has a school requirement<sup>4</sup> for MenACWY vaccination, which has helped to maintain high immunization rates that surpass the Healthy People 2020 objective of 80%.
- New Jersey does not have MenACWY booster dose coverage rates; however national rates for 2020 estimate **54.4%** of 17-year-olds have received 2 or more doses of MenACWY.\*
- National MenACWY vaccination estimates vary by poverty level, race/ethnicity, urbanicity, and insurance coverage.

### Data Notes

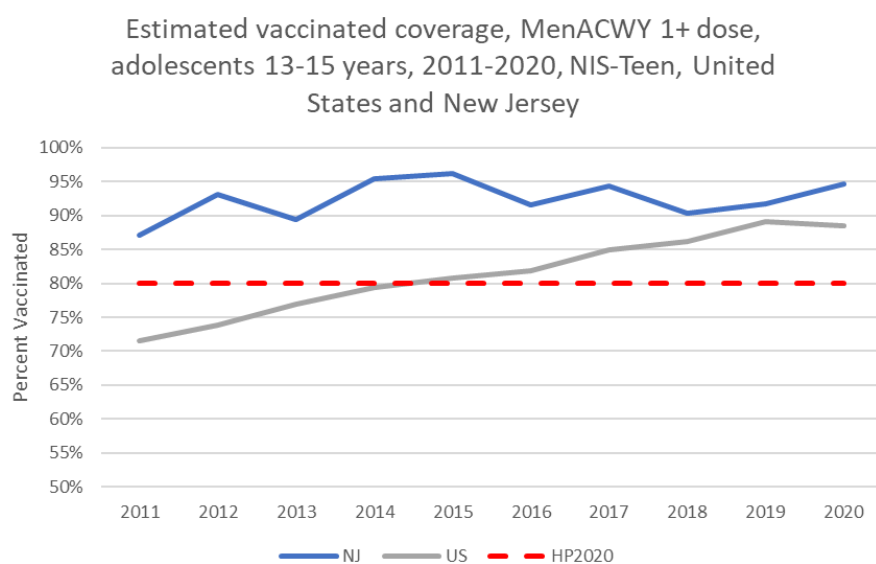
Currently, there are no coverage estimates either nationally or statewide for MenB vaccines. New Jersey-level data are also not available for MenACWY booster doses.

### Target

#### Healthy People 2020 Objective

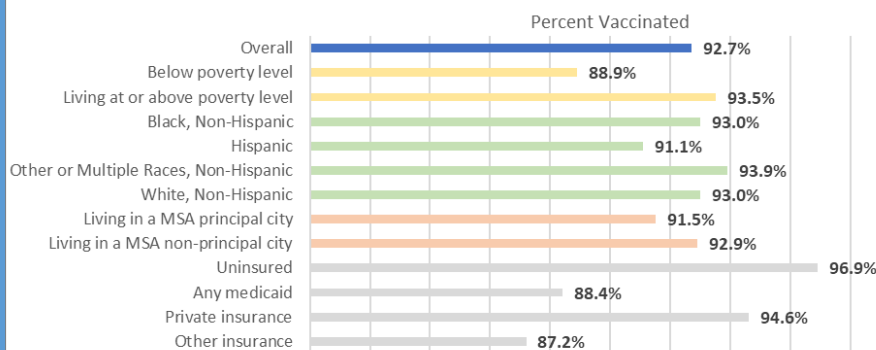
[IID-11.3] Increase the vaccination coverage level of 1 dose meningococcal conjugate vaccine for adolescents by age 13 to 15 years

**U.S. Target: 80%**



**SELECTED DEMOGRAPHICS**

MenACWY 1+ dose vaccination coverage among adolescents 13-17 years by various sociodemographic factors, survey years 2015-2019, New Jersey, NIS-Teen



#### Data Sources:

National Immunization Survey—Teen (NIS-Teen). Data can be accessed via TeenVaxView portal at: [www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html](http://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html).

\*Pingali C, Yankey D, Elam-Evans LD, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2020. MMWR Morb Mortal Wkly Rep 2021;70:1183–1190. DOI: <http://dx.doi.org/10.15585/mmwr.mm7035a1>.

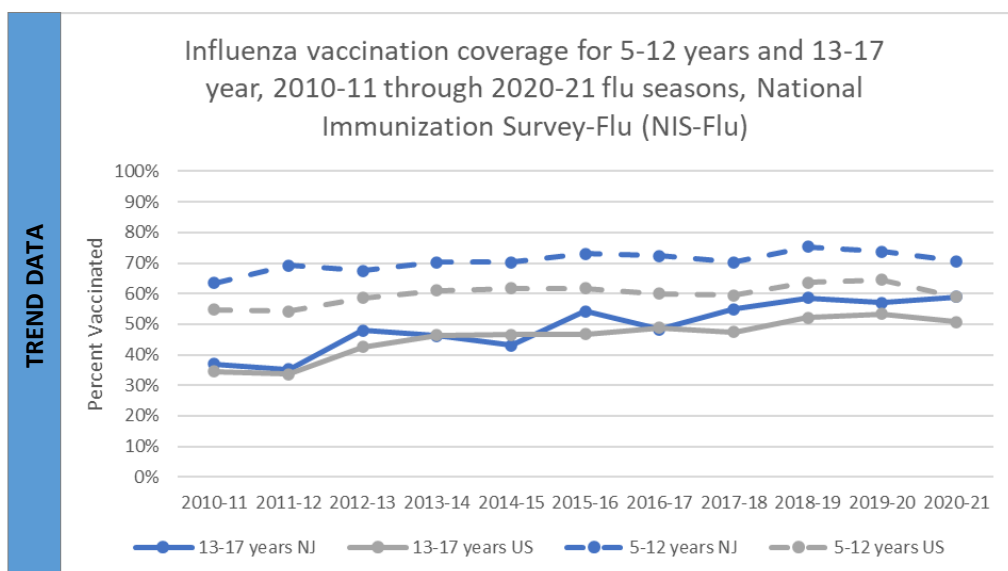


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### Influenza Vaccination

An annual influenza vaccine is recommended for everyone six months of age and older. Vaccination is particularly important for people who are at high risk of serious complications from influenza. High risk persons can include those 65 years and older, those with certain chronic medical conditions (such as asthma, diabetes, or heart disease), pregnant women and children under 5 years.<sup>6</sup>

The graph below presents trends in national and state influenza vaccination estimates for ages 5-12 years and 13-17 years. New Jersey data is represented with the blue lines and national data is represented with the gray lines. Solids lines indicate ages 13-17 years and dashed lines show estimates for 5-12 years.



### Key Findings

- Approximately **58.9%** of New Jersey's adolescents ages 13-17 years received a flu vaccination in the 2020-2021 flu season. This was slightly above the national average (**50.8%**) for this age group.
- Approximately **70.6%** of New Jersey's youth ages 5-12 years received a flu vaccination in the 2020-2021 flu season. Flu vaccination for this age group remains above the national average (**59.0%**).

### Targets

#### Healthy People 2030 Objective<sup>3</sup>

[IID-09] Increase the proportion of people who get the flu vaccine every year

**U.S. Target: 70%**

#### Healthy People 2020 Objective

[IID-12.11] Increase the percentage of children aged 6 months through 17 years who are vaccinated annually against seasonal influenza

**U.S. Target: 70%**

**Protect Me With 3+**  
YOUR HEALTH IS WORTH A SHOT!

The annual *Protect Me With 3+* campaign is an adolescent immunization awareness campaign hosted by the Partnership for Maternal and Child Health of Northern New Jersey in collaboration with the New Jersey Department of Health. Students in middle and high school are encouraged to submit posters or videos about one of the routine adolescent immunizations. The 2021-22 campaign is also allowing submissions on COVID-19 vaccine. Visit [www.protectmewith3.com](http://www.protectmewith3.com) to learn more about the campaign and to view previous winning submissions.

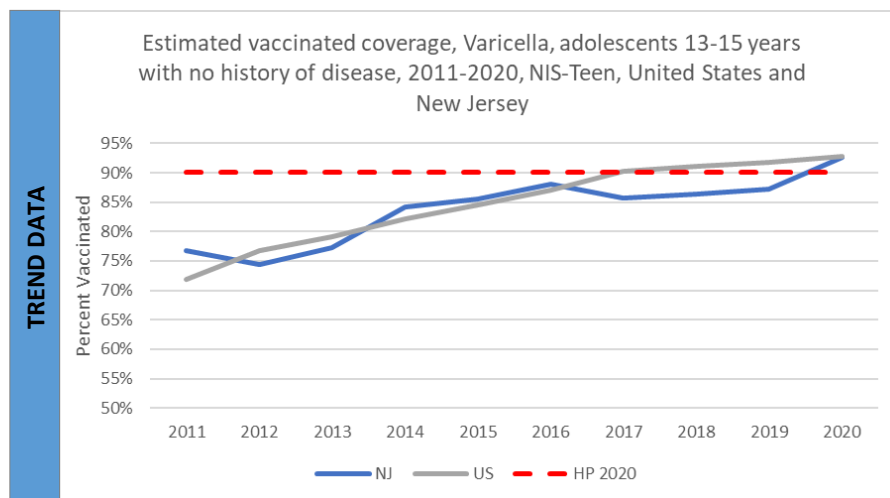




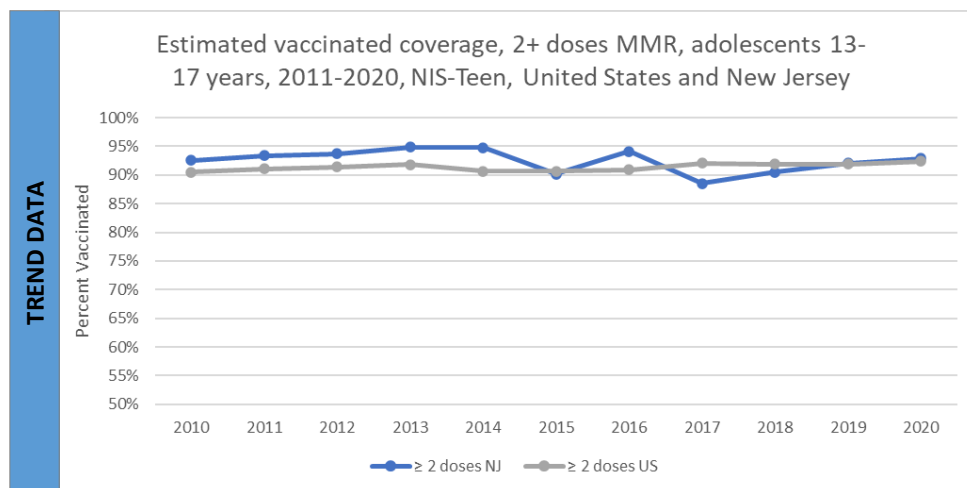
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### Varicella and MMR Vaccination

Varicella vaccination protects against chickenpox disease. Two doses of the vaccine are about 90% effective at preventing chickenpox. While varicella is a routine childhood immunization, catch-up vaccination can be administered to adolescents if they do not have evidence of immunity via a history of infection or prior vaccination.



MMR vaccination protects against three diseases: measles, mumps, and rubella. MMR is also a routine childhood immunization that can be administered to adolescents as catch-up vaccination if they have not yet received the vaccine.



### Key Findings

- Approximately **92.6%** of adolescents ages 13-15 years in New Jersey have received two or more doses of varicella vaccine according to the 2020 NIS-Teen. This is similar to the national average (**92.7%**) and above the Healthy People 2020 target of 90%.
- Varicella vaccination rates both nationally and in New Jersey have trended upward since 2011.
- Approximately **92.9%** of adolescents ages 13-17 years in New Jersey have received two or more doses of MMR vaccine according to the 2020 NIS-Teen, similar to the national average (**92.4%**).
- MMR vaccination rates have remained relatively consistent since 2010.

### Target

#### Healthy People 2020 Objective

[IID-11.2] Increase the vaccination coverage level of 2 doses of varicella vaccine for adolescents by age 13 to 15 years (excluding children who have had varicella)

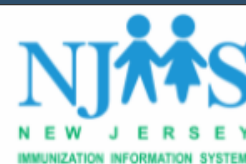
**U.S. Target: 90%**

Data Source: National Immunization Survey—Teen (NIS-Teen). Data can be accessed via TeenVaxView portal at: [www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html](http://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/index.html).

### New Jersey Immunization Information System (NJiIS)

Immunization registries are confidential, population-based, computerized information systems that collect and consolidate vaccination data within a geographic area. In New Jersey, the NJiIS is the established statewide immunization information system serving as the official repository of immunizations administered to its residents.

Visit [njiis.nj.gov](http://njiis.nj.gov) to learn more about New Jersey's immunization registry.



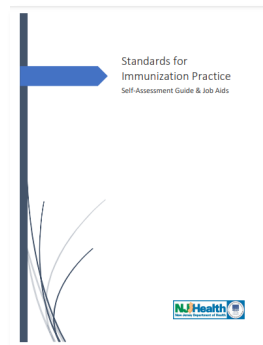


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### Immunization Standards

The most essential immunization practices are outlined in the Standards for Child and Adolescent Immunization Practice.<sup>7</sup> Among the standards are criteria that outline best practices to assess patient vaccination status at every clinical encounter, strongly recommend needed vaccines, either offer needed vaccines or refer patients to another provider who can administer the recommended vaccines, and document vaccinations received by patients in an immunization information system.

The New Jersey Department of Health, Vaccine Preventable Disease Program developed an immunization standards guide to assist in routine implementation of the standards. This guide provides a self-assessment job aid, instructions, and tips on how to improve upon self-identified gaps. The guide can be accessed at: [www.nj.gov/health/cd/documents/vpdp/imm\\_standards\\_guide.pdf](http://www.nj.gov/health/cd/documents/vpdp/imm_standards_guide.pdf).



### RECOMMENDATIONS

- Healthcare professionals should **use a strong recommendation** when patients are due for vaccines.
  - Clinicians are the most trusted source of vaccine information for parents and patients.
  - A strong recommendation from a healthcare professional is the best predictor of whether parents decide to vaccinate their child.
- Healthcare providers should **use evidence-based strategies** to increase immunization rates.
  - Establish a 16-year-old platform to help ensure adherence to receiving recommended vaccines at this age, as well as offering an opportunity for catching up on any missed vaccines.
  - Provide educational materials in waiting rooms. Materials should be in plain-language and should meet patients' social, cultural, and linguistic needs.
  - Assess patient immunization records at every visit and provide education on the importance of vaccination. Plan to continue the conversation if a patient is hesitant.
  - Use NJIIS to conduct reminder/recall reports to view patients who are due for vaccination, or have missed vaccinations. Outreach to those patients to set up follow-up appointments.<sup>8,9</sup>
  - Implement standing orders to allow other members of the healthcare team to administer immunizations.
  - Consider hiring or working with a partner organization to provide community outreach and education to diverse populations.
- **Decrease barriers** to immunizations. Patients should be aware that most health insurance plans cover the cost of recommended vaccines. Certain patients may be eligible to receive vaccines at no cost through the Vaccines For Children (VFC) program through VFC-enrolled doctors. The VFC program helps ensure that all children have a better chance of getting their recommended vaccines by providing vaccines at no cost to children who might not otherwise be vaccinated because of inability to pay.<sup>10</sup>

### REFERENCES

- 1 CDC. Vaccines at 11-12 years. Available at: [www.cdc.gov/vaccines/parents/by-age/years-11-12.html](http://www.cdc.gov/vaccines/parents/by-age/years-11-12.html).
- 2 CDC. Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021. Available at: [www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html](http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html).
- 3 Healthy People 2030. Available at: <https://health.gov/healthypeople>.
- 4 NJDOH. NJ School Immunization Requirements. Available at: [https://nj.gov/health/cd/documents/imm\\_requirements/k12\\_parents.pdf](https://nj.gov/health/cd/documents/imm_requirements/k12_parents.pdf).
- 5 CDC. HPV Infection. Available at: [www.cdc.gov/hpv/parents/about-hpv.html](http://www.cdc.gov/hpv/parents/about-hpv.html).
- 6 CDC. Flu symptoms and complications. Available at: [www.cdc.gov/flu/symptoms/symptoms.htm](http://www.cdc.gov/flu/symptoms/symptoms.htm).
- 7 Standards for Child and Adolescent Immunization Practices. National Vaccine Advisory Committee. Pediatrics Oct 2003, 112 (4) 958-963;
- 8 Reminder Systems and Strategies for Increasing Childhood Vaccination Rates. Available at: [www.cdc.gov/vaccines/hcp/admin/reminder-sys.html](http://www.cdc.gov/vaccines/hcp/admin/reminder-sys.html)
- 9 NJIIS Reminder Recall Help Guide. Available at: [https://njiis.nj.gov/docs/ReminderRecall/Reminder\\_Recall\\_Help\\_Guide.pdf](https://njiis.nj.gov/docs/ReminderRecall/Reminder_Recall_Help_Guide.pdf)
- 10 NJDOH. New Jersey Vaccines for Children Brochure. Available at: <https://njiis.nj.gov/docs/VFCBrochure.pdf>.